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CLAIMS:

1. A method of storing and retrieving items, comprising:
grouping said items into one or more groups of
5 said items;
recording the content of each of said groups;
comparing a batch of one or more orders for said
items with the recorded content of said groups in order to
locate a matching group from said groups that matches said
10 batch or orders; and
retrieving said matching group in order to fill
said batch of orders.
2. A method as claimed in claim 1, wherein said groups of
15 items constitute a plurality of sets of groups, each set
of groups comprising one or more groups of equal numbers
of items.
3. A method as claimed in claim 2, wherein each of said
20 groups has the same number of items.
4. A method as claimed in claim 1, wherein said batch of
orders comprises a consecutively received plurality of
orders.
- 25 5. A method as claimed in claim 1, including locating
each of said groups of items in or on a container so that
each of said groups can readily be transported until a
suitable batch of orders is received and retrieved when a
30 suitable batch of orders has been received.
6. A method as claimed in claim 1, including recording
the order of said items in each of said groups, and
matching said batch of orders with a matching group on the
35 basis of both the content and sequence of items in said
order and in said matching group of said items.

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7. A method as claimed in claim 1, wherein, if none of the existing groups of items matches a batch of orders, the method includes reducing the size of said batch of orders until said reduced batch matches a portion of at least one of said groups of items, and deeming said portion of said group of items to constitute said matching group.

8. A method as claimed in claim 7, including subsequently grouping the remaining items of said group with other items to form new groups of said items.

9. A method as claimed in claim 1, wherein, if none of the existing groups of items matches a batch of orders, the method includes replacing at least one of said orders with another order from outside said batch of orders to form a modified batch of orders, and then matching said modified batch of orders with a matching group on the basis of both the content and sequence of items in said order and in said matching group of said items.

10. A method as claimed in claim 1, including optimising the size of said groups.

11. A method as claimed in claim 1, including storing in a computer database data indicative of the incoming items and the location in which each of said incoming item is stored.

12. A method of storing and retrieving items, comprising:
grouping said items into one or more groups of said items;
recording the content of each of said groups;
comparing a batch of orders for said items with the recorded content of said groups in order to locate a matching group from said groups that most closely matches said batch or orders;

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retrieving said matching group; and
modifying said matching group if necessary to
exactly match said batch of orders;
whereby said batch of orders can be filled.

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13. An apparatus for storing and retrieving items,
comprising:

data storage means for recording the location and
content of each of a plurality of groups of said items;

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data processing means for receiving information
corresponding to a plurality of orders and for grouping at
least some of said orders into a batch of orders and
comparing said batch of orders with said contents of said
groups of items in order to identify and locate a matching

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group; and

communication means for communicating the
identity of said matching group.

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14. An apparatus as claimed in claim 13, including
retrieval means for receiving the identity of said
matching group from said communication means and
retrieving said matching group.

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15. An apparatus as claimed in claim 14, wherein said
retrieval means is also a storage means, for storing each
of said groups of items as directed by said data
processing means.

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16. A method of storing and retrieving items, comprising:
storing said items into one or more groups of
said items;

recording the location of each of said items
according to at least group;

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comparing an order or orders for a plurality of
requested items with said recorded locations; and

locating as many of said requested items as
possible in a first of said groups and then, if any

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requested items are not located in said first of said groups, locating as many previously remaining requested items as possible in each of subsequent ones of said groups;

5 whereby once all of said requested items have been located, requested items can be retrieved to fill said order or orders.

10 17. A method as claimed in claim 16, including retrieving said requested items and subsequently treating said retrieved items as no longer stored in any of said groups.

15 18. A method as claimed in claim 16, including designating the group with the greatest number of the requested items as the first group.

20 19. A method as claimed in claim 16, including checking said groups sequentially for previously unlocated items, or in an order that maximizes the number of items located in each successive group.

25 20. A method as claimed in claim 16, including determining for a number of possible assignments of said first group and order of subsequent groups the total number of groups required to locate all of said requested items, and then choosing the assignment of first group and order of subsequent group that either minimizes the total number of groups from which the requested items are retrieved or minimizes the distance required to be
30 travelled between groups to retrieve said requested items.

35 21. A method as claimed in claim 20, wherein said number of possible assignments of said first group and order of subsequent groups constitutes all possible assignments of said first group and order of subsequent groups.

22. An apparatus for storing and retrieving items,

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comprising:

one or more storages, each for storing a
respective group of said items;

5 a data storage for recording the location of each
of said items according to at least group;

a data processor for comparing an order or orders
for a plurality of requested items with said recorded
locations, and for locating as many of said requested
items as possible in a first of said groups and then, if
10 any requested items are not located in said first of said
groups, locating as many previously remaining requested
items as possible in each of subsequent ones of said
groups;

15 whereby said apparatus is operable to locate all
of said requested items for subsequent retrieval.

23. An apparatus as claimed in claim 22, including a
computer having said data storage and said data processor.

20 24. An apparatus as claimed in claim 22, wherein each of
said storages includes a signal means to identify to a
user the location of a located item, or an ejector for
ejecting a requested item.

25 25. An apparatus as claimed in claim 22, wherein each of
said storages includes a signal means in the form of a
lamp to identify to a user the location of a located item.

30 26. An apparatus as claimed in claim 22, wherein said
apparatus is operable to send a data signal to an
automated item retriever indicative of the location of a
respective requested item, so that said requested items
can be retrieved automatically.

35 27. An apparatus as claimed in claim 22, wherein said
data processor is operable to check groups sequentially
for previously unlocated items.

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28. An apparatus as claimed in claim 22, wherein said data processor is operable to check groups in an order that maximizes the number of items located in each successive group.

29. An apparatus as claimed in claim 22, wherein said data processor is operable to determine a number of possible assignments of said first group and order of subsequent groups, and to choose the assignment of first group and order of subsequent group that either minimizes the total number of groups from which the requested items are retrieved or minimizes the distance to be travelled between groups to retrieve said requested items.

30. An apparatus as claimed in claim 29, wherein said number of possible assignments of said first group and order of subsequent groups constitutes all possible assignments of said first group and order of subsequent groups.

31. A computer readable medium with computer program portions for controlling a computer to perform the method defined in any one of claims 1, 12 or 16.